

Tactical C4I Systems

COBHAM

Integrated Digital Soldier System (IDSS)

The most important thing we build is trust





Cobham's IDSS provides fully integrated C4I solutions to improve combat effectiveness and manage the chaos of battle at the Tactical Level of Operations

Decisive action based upon a common tactical picture and accurate situational awareness

Key to success in any military operation is the ability for soldiers at the combat level to directly influence their situation, in real time, through decisive actions based upon a common tactical picture and accurate situational awareness.

Cobham's C4I systems, soldier and platform based, provide a fully integrated Combat Management System (CMS). This allows mounted and dismounted combat units to monitor, analyse, communicate and react effectively to the rapidly changing combat environment, even through the 'chaos of battle'. Such improved capability directly and significantly enhances mission success in terms of survivability, manoeuvrability and lethality.

Cobham's tactical C4I users may be equipped with the wearable IDSS with its Soldier Data Terminals (SDT) or may access the system via the BattleHawk Vehicle System (BHVS) or Command Terminal. With hardware and software conceived, designed and built by Cobham, IDSS and BHVS provide fully integrated solutions that can be easily reconfigured to meet customer requirements in terms of mission profile, load carriage and platform integration.

Incorporating advanced microprocessor technology and operating on Windows XP or Linux, all systems offer an open architecture, simplifying future technology insertion and

providing the ability to run a wide variety of additional third party applications.

At the heart of Cobham's C4I systems is BattleHawk software. BattleHawk is highly capable and utilises a touch screen HCI to provide full digital mapping, 2D and 3D terrain analysis, navigation, situational awareness and integrated command and control. Protocols for information exchange to higher level C4I systems can be embedded into BattleHawk CMS.

Typical additional applications hosted by the Cobham's C4I systems include control and monitoring of remote sensor networks including RGVs and UAVs.

Delivering more processing capability at lower power

IDSS

Designed to meet military standards for environmental and EMC performance, IDSS provides combat troops with a lightweight, compact solution to deliver tactical SA, navigation and a common operating picture. With complete design control over the core system components and modules, including software, Cobham is able to minimise integration risk and ensure IDSS components and communications devices function correctly. Key design criteria for Cobham's IDSS focused on the following:

- Reduced size and weight
- Reduced power consumption
- Open architecture
- Ease-of-use and carriage

The IDSS is a compact, lightweight, low power system specifically designed to withstand the rigours of battle and the issues faced by load limitations on combat troops.

IDSS consists of three core modules:

- Soldier Data Terminal (SDT)
- The Radio Interface Module (RIM)
- The Communications Unit (radio)

Processing Capability

The heart of IDSS is the SDT, which runs Windows XP embedded as the open architecture operating system. The SDT is a miniature PC and delivers unrivalled capability for manipulation of data such as DTED and streaming video. As with all Cobham's data terminals, it is an open architecture capable of running additional third party applications.

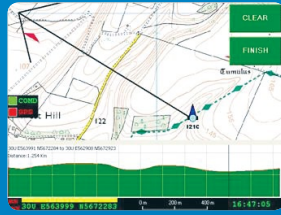
The daylight readable touch screen has a night readable mode and provision is made for an external video output for head mounted displays or larger briefing screens.



The SDT utilises Cobham's BattleHawk software, which provides a very user friendly environment and an HCI specifically designed for 'soldier use'.

Interfaces

IDSS provides interfaces to control and monitor remote sensor networks including CBRN sensors, cameras and remote control of RGVs and UAVs.



- Ease-of-Use
- Simplified Training

- High Reliability
- High Availability

- Low Life Cycle Costs
- Flexible Configuration

IDSS Configuration

The configuration and 'box count' of IDSS has been greatly simplified with the introduction of the RIM. Though shown connected to the radio, the RIM can also be mounted separately depending on radio technology.

The simplified harness and common battery supply reduce the integration problems and complexity of the cabling often associated with similar systems. The lower box count and weight is reduced thus simplifying load carriage.



The SDT shown is the SDT Planning (SDT P) with a larger display to allow the user flexibility to create detailed operational plans and manipulate map data.

IDSS is not radio specific and will work with low data rate legacy CNR, or the more advanced IP based data radios. The system shown utilises the Harris SPR with RIM attached. Battery options include: central or separate, primary or secondary cells and other technologies.



SDT Planning (P)

The SDT P benefits from a larger touch screen display that provides robust planning and visualisation functionality where wider situational awareness view is required by commanders.



SDT Tactical (T)

The SDT T has a smaller screen and footprint for deployment in areas where detailed planning and a wide view of situational awareness is not required.

Key Features of IDSS

- Comprehensive blue force SA
- Red force picture
- Full navigation suite
- Georeferenced free hand drawing
- White board sketching
- Messaging with user defined pre-formatted messages in an Email environment
- Terrain analysis, including dead ground
- Mission recording and playback for post mission analysis
- Create/display mission overlays
- Video output for large briefing displays and monocular/head mounted displays
- High specification Windows XP SDT
- Low power consumption
- Small size and weight
- Integrates with a wide range of sensors including laser binoculars, ground sensors IR and TI vision systems



RIM

The RIM provides a unique, compact, interface between the SDT and other IDSS components such as the radio and various sensors. It can be connected to the base of the radio, as shown, or configured as a separate unit, depending on the communication bearer requirements and technology. This innovative module reduces weight and the overall box count of the system. Key features of the RIM are:

- Radio and battery agnostic
- Includes Digital Magnetic Compass
- INS option available
- Will support the next generation PY code GPS/SAASM unit
- Audio mixer for multiple radios and SDT
- Interfaces and expansion ports (Ethernet, USB and RS232)

Tactical C4I Integration



Trusted Tactical C4I Systems



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